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09/669,215	09/25/2000	Larry Cecil Brown	RAC 89,921	5454
7590	01/02/2004		EXAMINER	
			MASKULINSKI, MICHAEL C	
			ART UNIT	PAPER NUMBER
			2113	
DATE MAILED: 01/02/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/669,215	BROWN, LARRY CECIL
	Examiner	Art Unit
	Michael C Maskulinski	2113

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 23 October 2003.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 19-21 is/are allowed.
- 6) Claim(s) 1,2,4-16 and 18 is/are rejected.
- 7) Claim(s) 3 and 17 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. §§ 119 and 120

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All b) Some \* c) None of:  
1. Certified copies of the priority documents have been received.  
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) The translation of the foreign language provisional application has been received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

#### Attachment(s)

- |  |  |
|--|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                               | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)           | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ . | 6) <input type="checkbox"/> Other: _____ .                                   |

**Non-Final Office Action**

***Claim Rejections - 35 USC § 112***

1. In view of the recent amendments, the rejection of claims 14 and 20 under the second paragraph of 35 U.S.C. 112 for lack of antecedent basis has been withdrawn.
2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 4 and 13 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for an interruption by a condition including at least one of (a) a fault condition, (b) an abnormal operation condition, or (c) a commanded interruption condition (see Applicant's specification: page 7, lines 29-31), does not reasonably provide enablement for an interruption by a condition including at least one of (a) a fault condition, (b) an abnormal operation condition, and (c) a commanded interruption condition. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims. The Applicant's specification on page 7, lines 29-31 does not support every condition in the group but rather one condition of the group.

4. Claim 10 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for visual indicators comprising at least one of (a) LED's, (b) a visible progressive illuminated bar indicator, (c) non-LED illuminations, or

(d) audible indications (see Applicant's specification: page 7, lines 40-41 continued on page 8, lines 5-6), does not reasonably provide enablement for (a) LED's, (b) a visible progressive illuminated bar indicator, (c) non-LED illuminations, and (d) audible indications. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims. The Applicant's specification on page 7, lines 40-41 continued on page 8, lines 5-6 does not support every visual device in the group but rather one visual device of the group.

***Claim Rejections - 35 USC § 102***

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
6. Claims 1, 4-7, 10, 13, 14, and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Kim et al., U.S. Patent 5,202,914.

Referring to claim 1:

- a. In column 4, lines 55-60, Kim et al. disclose that a telephone set may be connected to the system to provide connection with the remote data processing center (a bi-directional communication system).
- b. In Figure 2B, Kim et al. teach generating ordered status indications reflecting the status of completion of sequentially performed groups of operations wherein individual status indications are associated with corresponding groups of operations.

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c. In column 5, lines 7-11, Kim et al. disclose that a linear array of light emitting diodes (LED's) is provided to show the state of the system. An LED is lit when the system is turned on and all self-tests are satisfactory (capturing said generated status indications and retaining said captured status indications following initiation of repetition of said groups of operations).

d. In Figure 2B, Kim et al. teach providing said retained captured status indications as identification of an attained operational status of said system for system operation diagnosis.

Referring to claim 4, in column 5, lines 7-23, Kim et al. disclose that the LED is lit when the system is turned on and all self-tests are satisfactory. Otherwise the LED will blink if an error is detected (said status indication identify the status of groups of operations being performed prior to interruption by a condition including at least a fault condition).

Referring to claim 5, in column 5, lines 7-10, Kim et al. disclose that a linear array of LED's is provided to show the state of the system. The LED is lit when the system is turned on (said captured status indications are provided in response to a User command). Further, in Figure 2B, Kim et al. teach captured status indications that identify the highest operational state reached in initialization of said system prior to an interruption.

Referring to claim 6, in column 5, lines 7-10, Kim et al. disclose that a linear array of LED's is provided to show the state of the system. The LED is lit when the system is turned on (said User command comprises selection of a power switch setting).

Referring to claims 7 and 16, in column 5, lines 7-10, Kim et al. disclose that a linear array of LED's is provided to show the state of the system (said captured status indications are usable in combination for fault finding and problem diagnosis by a technician).

Referring to claim 10, in Figure 2B, Kim et al. teach displaying the retained captured status indications as hierarchically ordered indicators comprising at least LED's. Further, in column 5, lines 43-46, Kim et al. disclose an LCD that also displays indicator bars or dashes in association with labels printed on the body of the system to display various system states and error conditions (a visible progressive illuminated bar indicator and non-LED illuminations).

Referring to claim 13:

- a. In column 4, lines 55-60, Kim et al. disclose that a telephone set may be connected to the system to provide connection with the remote data processing center (a modem system).
- b. In Figure 2B, Kim et al. teach generating hierarchically ordered status indications reflecting the status of completion of sequentially performed groups of operations wherein individual status indications are associated with corresponding groups of operations and identify the status of groups of operations being performed prior to interruption by a condition including a fault condition.
- c. In column 5, lines 7-11, Kim et al. disclose that a linear array of light emitting diodes (LED's) is provided to show the state of the system. An LED is lit when

the system is turned on and all self-tests are satisfactory (capturing said generated status indications and retaining said captured status indications following initiation of repetition of said groups of operations).

d. In Figure 2B, Kim et al. teach providing said retained captured status indications as identification of an attained operational status of said system for system operation diagnosis.

Referring to claim 14, in Figure 2B, Kim et al. disclose a power up modem loopback test fail (said sequentially performed groups of operations comprise at least an initialization procedure of said modem system).

### ***Claim Rejections - 35 USC § 103***

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al., U.S. Patent 5,202,914, and further in view of the ACM6000EB Cable Modem User's Manual.

Referring to claim 2:

a. In column 6, lines 41-50, Kim et al. disclose that the microcontroller communicates with remote data processing center over the telephone network through a modem chip. However, Kim et al. don't explicitly disclose the use of a cable modem. The Cable Modem User's Manual teaches the use of a cable modem. It would have been obvious to one of ordinary skill at the time of the

invention to include the cable modem of the Cable Modem User's Manual into the system of Kim et al. A person of ordinary skill in the art would have been motivated to make the modification because a cable modem is an improvement over a dial up modem. This is evident on page 4 of the Cable Modem User's Manual, which boasts remarkable transfer rates and features such as low power consumption.

b. On page 7, the Cable Modem User's Manual discloses LED indicators that indicate the modem is powered, the modem is registered on the cable operator's network, normal operation, failed operation, and the status of the connection between the LAN and PC (said generating step generates hierarchically ordered status indications).

c. On page 7, the Cable Modem User's Manual discloses an LED indicator that indicates an error (an abnormal condition monitoring procedure of said cable modem system). Further, in Figure 2B, Kim et al. teach an initialization procedure of the cable modem system namely the power up tests, and Kim et al. teach a fault diagnosis procedure of the cable modem system namely the link is down between the PC and data center computer.

9. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al., U.S. Patent 5,202,914 as applied to claim 1 above, and further in view of Feagans, U.S. Patent 6,366,297 B1.

Referring to claim 8, in Figure 2B, Kim et al. teach a providing step that comprises at least displaying said retained captured status indications to a User of said

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system. Further, in column 9, lines 50-52, Kim et al. disclose storing an appropriate error code. However, Kim et al. don't explicitly disclose that the memory is accessible by a User of the system. In column 7, lines 11-15, Feagans discloses a request for status indicators such as status registers. It would have been obvious to one of ordinary skill at the time of the invention to include the ability to access status registers of Feagans into the system of Kim et al. A person of ordinary skill in the art would have been motivated to make the modification because *one advantage of using the terminal application to control the device is that it enables the user to obtain information about the device directly using device commands that are device data requests* (see Feagans: column 6, lines 47-50).

10. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Feagans, U.S. Patent 6,366,297 B1 and Kim et al., U.S. Patent 5,202,914, and further in view of McKaughan et al., U.S. Patent 6,014,744.

Referring to claim 9, in column 6, lines 4-32, Kim et al. disclose memory in the microcontroller, which stores the application program and system parameters. However, neither Kim et al. nor Feagans explicitly disclose retaining said captured status indications during re-cycling of said sequentially performed groups of operations in a removable storage medium. In column 1, lines 55-67 continued in column 2, lines 1-7, McKaughan et al. disclose storing a BOOTING flag that indicates whether the last iteration of the booting process was completed successfully. It would have been obvious to one of ordinary skill at the time of the invention to include the BOOTING flag of McKaughan et al. into the combined system of Kim et al. and Feagans. A person of

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ordinary skill in the art would have been motivated to make the modification because setting the BOOTING flag indicates where the error occurred so that the failure can be remediated (see McKaughan et al.: column 4, lines 26-31).

11. Claims 11, 15, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al., U.S. Patent 5,202,914, and further in view of McKaughan et al., U.S. Patent 6,014,744.

Referring to claims 11, 15, and 18, in column 6, lines 4-32, Kim et al. disclose memory in the microcontroller, which stores the application program and system parameters. However, Kim et al. don't explicitly disclose retaining said captured status indications during re-cycling of said sequentially performed groups of operations in a removable storage medium. In column 1, lines 55-67 continued in column 2, lines 1-7, McKaughan et al. disclose storing a BOOTING flag that indicates whether the last iteration of the booting process was completed successfully. It would have been obvious to one of ordinary skill at the time of the invention to include the BOOTING flag of McKaughan et al. into the system of Kim et al. A person of ordinary skill in the art would have been motivated to make the modification because setting the BOOTING flag indicates where the error occurred so that the failure can be remediated (see McKaughan et al.: column 4, lines 26-31).

12. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al., 5,202,914, and further in view of Schieve et al., U.S. Patent 5,455,933. In column 4, lines 55-60, Kim et al. disclose the use of a telephone set to communicate with a remote data processing center. In column 3, lines 42-52, Schieve et al. disclose sending an

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indication of a selection of diagnostic routines to be performed from a remote location. It would have been obvious to one of ordinary skill at the time of the invention to include the remote diagnostic system of Schieve et al. into the system of Kim et al. A person of ordinary skill in the art would have been motivated to make the modification because there is a need in the art for a system and method for allowing remote diagnosis of PCs, even those suffering non-bootable faults, by a remote technician that are cost and hardware efficient (see Schieve et al.: column 3, lines 16-19).

***Allowable Subject Matter***

13. Claims 19-21 are allowed.
14. The following is a statement of reasons for the indication of allowable subject matter: the prior art does not teach or reasonably suggest a hierarchical sequence of operational levels with individual levels including one or more of (a) tuning, (b) ranging, (c) configuring, and (d) registering operations and having a corresponding status indication.
15. Claims 3 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
16. The following is a statement of reasons for the indication of allowable subject matter: the prior art does not teach or reasonably suggest that groups of operations include two different operations from operations including (a) tuning, (b) ranging, (c) configuring and (d) registering where the groups of operations is a four choose two

combination of the operations including (a) tuning, (b) ranging, (c) configuring and (d) registering.

### ***Response to Arguments***

17. Applicant's arguments filed October 23, 2003 have been fully considered but they are not persuasive.

18. On page 8, under the section Rejection of Claims 1,4-8,10,13,14,16,19, and 20 under 35 U.S.C. 102(b), with reference to claim 1, the Applicant argues, "Contrary to the Examiner's contention, Kim et al. do not disclose 'retaining said captured status indications following initiation of repetition of groups of operations' in a bi-directional communication system performing a sequence of operations as in the present claimed invention. Kim et al. disclose a transportable, secure postage meter recharging system that is more efficient than the prior art. Kim et al. disclose arrays of LED's to indicate error messages in recharging operations using a complex set of codes that must be interpreted using a code interpretation sheet similar to figure 2B. This is unlike the present invention which claims which is concerned with status indications corresponding to the sequence of operations in a bi-directional communication system performing a sequence of operations (emphasis by Applicant)." The Examiner respectfully disagrees. In Figure 2B, Kim et al. explicitly disclose power up tests that include a RAM test, a ROM test, and EEPROM test, and a modem loopback test. The system of Kim et al. is

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bi-directional because it has a modem. Further, power up tests are a sequence of operations.

19. Applicant's arguments, see paper no. 5, filed October 23, 2003, with respect to the rejection(s) of claim(s) 8 under 35 U.S.C. 102(b) as being anticipated by Kim et al., U.S. Patent 5,202,914 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Feagans, U.S. Patent 6,366,297 B1.

20. On page 8, under the section Rejection of Claims 1,4-8,10,13,14,16,19, and 20 under 35 U.S.C. 102(b), with reference to claim 10, the Applicant argues, "Referring to claim 10, Kim et al. merely suggest utilizing LED's to display the current status of the system, but neither disclose nor suggest 'displaying said retained captured status indications as hierarchically ordered (emphasis by Applicant) visual indicators' as in the present claimed invention. By contrast, the present claimed invention discloses visual indications representing the sequence of operations performed, for example, in an initialization of a modem. This innovation incorporates diagnostic capabilities sufficient to support in-home fault diagnosis and status identification." The Examiner respectfully disagrees. In Figure 2B, Kim et al. explicitly disclose power up tests that include a RAM test, a ROM test, and EEPROM test, and a modem loopback test. In power up tests there is always an order as to what is performed first, second, third, etc. By displaying the status of each test, Kim et al. show a hierarchical order of the status of the system. Further, the Examiner would like to add that if the Applicant is trying to argue the arrangement of the LED lights in the system of Kim et al. isn't the same as the

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Applicant's invention, then the Examiner would like to point out that this is merely design choice and a matter of wiring the lights differently.

21. Applicant's arguments, see paper no. 5, filed October 23, 2003, with respect to claim 19 have been fully considered and are persuasive. The rejection of claim 19 under 35 U.S.C. 102(b) as being anticipated by Kim et al., U.S. Patent 5,202,914 has been withdrawn.

22. On pages 8-9, under the section Rejection of Claims 1,4-8,10,13,14,16,19, and 20 under 35 U.S.C. 102(b), with reference to claim 13, the Applicant argues, "Contrary to the Examiner's contention, Figure 2B does not teach 'generating hierarchically ordered (emphasis by Applicant) status indication reflecting the status of completion of sequentially performed (emphasis by Applicant) groups of operations wherein individual status indications are associated with corresponding groups of operations and identify the status of groups of operations being performed prior to interruption by a condition including... a fault condition' as in the present claimed invention." The Examiner disagrees for at least the reasons cited in paragraph 18 above.

23. On pages 9-10, under the section Rejection of claim 2 under 35 U.S.C. 103(a), the Applicant argues, "While the User's Manual discloses status indication, the status indications are not hierarchically ordered status indications reflecting the status of completion of sequentially performed groups of operations as in the present claimed invention. In fact, the Test LED Indicator on page 7 of the User's Manual recommends contacting customer support if the Test LED indicator is on. By contrast, the present claimed invention discloses 'retaining said captured status indications following initiation

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of repetition of said groups of operations; providing said retained captured status indications as identification of operations; and providing said retained captured status indications as identification of an attained operational status of said system for system operation diagnosis.' The User's Manual neither discloses nor suggests such an innovation." The Examiner respectfully disagrees. The fact that the Test LED indicator on page 7 of the User's Manual recommends contacting customer support if the Test LED indicator is on has no relevance to claim 2. Further, on page 7, the Cable Modem User's Manual discloses LED indicators that indicate the modem is powered, the modem is registered on the cable operator's network, normal operation, failed operation, and the status of the connection between the LAN and PC. As stated above, operations happen in a certain order, therefore the operations in the Cable Modem User's Manual are hierarchical. On page 7, the Cable Modem User's Manual discloses and LED indicator that indicates an error (an abnormal condition monitoring procedure of said cable modem system). Further, in Figure 2B, Kim et al. teach an initialization procedure of the cable modem system namely the power up tests, and Kim et al. teach a fault diagnosis procedure of the cable modem system namely the link is down between the PC and data center computer.

24. Applicant's arguments, see paper no. 5, filed October 23, 2003, with respect to claims 3 and 17 have been fully considered and are persuasive. The rejection of claims 3 and 17 under 35 U.S.C. 103(a) as being unpatentable over Kim et al., U.S. Patent 5,202,914, and further in view of Unger et al., U.S. Patent 6,230,326 B1 has been withdrawn.

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25. On pages 11-12, under the section Rejection of claims 9, 11, 15, 18, and 21 under 35 U.S.C. 103(a), the Applicant argues, "McKaughan et al. concerns booting (initialization) of a computer system in which a user interface (i.e. monitor) is a required operational element. The present claimed invention, on the other hand, concerns a cable modem, or other bi-directional communication device, in which a user interface is not a required element. However, as shown in the present claimed invention, such a user interface (status LED's 89) is useful in obtaining a diagnosis of problems occurring during sequentially performed groups of operations." The Examiner is confused as to the relevance of this argument to the claim language of claims 9, 11, 15, 18, and 21. Further, the Applicant contradicts the argument by stating that in the present claimed invention, such a user interface is useful in obtaining a diagnosis of problems occurring during sequentially performed groups of operations.

26. On page 13, under the section Rejection of claim 12 under 35 U.S.C. 103(a), the Applicant argues, "Schieve et al. neither disclose nor suggest generating hierarchically ordered (emphasis by Applicant) status indications reflecting the status of completion of sequentially performed (emphasis by Applicant) groups of operations in which individual status indications are associated with corresponding groups of operations." The Examiner agrees because Kim et al teach this limitation. The rejection of claim 12 is a combination of Schieve et al. and Kim et al.

***Conclusion***

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C Maskulinski whose telephone number is (703) 308-6674. The examiner can normally be reached on Monday-Friday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert W Beausoliel can be reached on (703) 305-9713. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

MM

  
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